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Male Adolescents' Gender Attitudes and Violence: Implications for Youth Violence Prevention

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Abstract

Introduction—This study analyzed the associations among male adolescents' gender attitudes, intentions to intervene, witnessing peers' abusive behaviors, and multiple forms of adolescent violence perpetration. This community-based evaluation aims to inform future youth violence prevention efforts through the identification of potential predictors of interpersonal violence perpetration.

Methods—Cross-sectional data were from baseline surveys conducted with 866 male adolescents, aged 13–19 years, from community settings in 20 lower-resource neighborhoods in Pittsburgh, PA (August 2015 — June 2017), as part of a cluster RCT to evaluate a sexual violence prevention program. Participants completed in-person, anonymous electronic surveys about gender attitudes, bystander intentions, witnessing peers' abusive behaviors, violence perpetration, and demographics. The analysis was conducted between 2018 and 2019.

Results—The youth identified mostly as African American (70%) or Hispanic, multiracial, or other (21%). Most (88%) were born in the U.S., and 85% were in school. Youth with more equitable gender attitudes had lower odds of self-reported violence perpetration across multiple domains, including dating abuse (AOR=0.46, 95% CI=0.29, 0.72) and sexual harassment (AOR=0.50, 95% CI=0.37, 0.67). The relationship between intentions to intervene and violence

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perpetration was inconclusive. Witnessing peers engaged in abusive behaviors was associated with increased odds of multiple types of violence perpetration, such as dating abuse (witnessed 3 or more behaviors, AOR=2.41, 95% CI=1.31, 4.44).

Conclusions—This is the first U.S.-based study to elicit information from male adolescents in community-based settings (rather than schools or clinics) about multiple types of interpersonal violence perpetration. Findings support violence prevention strategies that challenge harmful gender and social norms while simultaneously increasing youths' skills in interrupting peers' disrespectful and harmful behaviors.

INTRODUCTION

In the U.S., about 1 in 11 female and 1 in 15 male high school students reported ever experiencing physical dating violence, and 1 in 9 female and 1 in 36 male students reported sexual dating violence in the last year.¹ Among the adults who experienced partner violence, 26% of women and 15% of men first experienced such violence before the age of 18 years.² One in 3 female and nearly 1 in 4 male victims of completed or attempted rape experienced this for the first time between age 11 and 17 years, highlighting the need for partner and sexual violence prevention during adolescence.² The perpetration of partner and sexual violence is associated with other forms of violence, including bullying, sexual harassment, and youth violence,^{3,4} prompting calls for cross-cutting prevention strategies to reduce not only sexual violence but also multiple forms of violence perpetration.⁵ At the individual level, promising strategies for preventing sexual and partner violence perpetration include challenging harmful gender norms that condone violence against women and building bystander behavior skills (i.e., increasing the likelihood of male adolescents interrupting peers' harmful behaviors toward girls).^{6,7}

Domestic and international research highlight addressing gender inequity and changing the norms that condone violence against women as a key prevention strategy.^{8–10} Multiple studies have demonstrated the associations between males' gender attitudes and behaviors that degrade women and reinforce rigid stereotypes about masculinity with the perpetration of sexual and partner violence by males.^{11–14} Interventions focused on promoting gender equity have been shown to reduce violence and substance use, increase condom use, decrease transactional sex, and increase communication between couples.^{15–18} Such “gender-transformative” strategies may also be relevant for reducing interpersonal violence perpetration more broadly among male adolescents.

The evaluations of programs promoting gender equity from international settings demonstrate their effectiveness in reducing men's perpetration of violence against women and girls.¹⁹ Such prevention programs encourage the critical analysis of gender norms, challenge homophobia and gender-based harassment, and build skills to question harmful masculine norms and to interrupt disrespectful behaviors.^{9,10} Sexual and partner violence perpetration occur among men who subscribe to hegemonic notions of masculinity that include harboring feelings of sexual entitlement and control over women, endorsing bias-based prejudices regarding homosexuality, and condoning abuse perpetration.^{20–23} Additionally, such gender inequitable attitudes (specifically endorsing hegemonic

masculinity) are associated with behaviors considered precursors to sexual and partner violence perpetration—sexual harassment, homophobic teasing, and bullying.^{24,25} Less clear is whether such attitudes are associated with other forms of violence perpetration, youth violence in particular (i.e., physical fights with or without weapons). Elucidating the potential influence of gender attitudes on male adolescents' violence perpetration more broadly may inform prevention programming.

The perceived tolerance for sexual and partner violence within a peer environment may also socially sanction violent behaviors and may reduce young men's willingness and ability to intervene when witnessing such behaviors among peers.²¹ Witnessing these behaviors may create a context in which violence against women and girls becomes normalized, and the more an individual witnesses their peers' abusive (and gendered) behaviors, the greater the likelihood of an individual perpetrating such behaviors. Bystander behavior programs are intended to help individuals increase their confidence in both recognizing abusive behaviors, as well as intervening when witnessing such behaviors.⁶ Greater intentions to intervene with peers may, in turn, be associated with lower odds of an individual's violence perpetration.

To date, no studies in youth violence prevention have examined the role of attitudes about gender equity and bystander intervention on the perpetration of violence more broadly. The purpose of this study was first to examine associations of gender equitable attitudes with multiple forms of violence perpetration (i.e., youth violence, bullying, and homophobic teasing),^{26,27} and second, to examine the extent to which intentions to intervene and exposure to witnessing peers' abusive behaviors toward girls are associated with multiple forms of interpersonal violence perpetration. The authors hypothesized that gender equitable attitudes and intentions to intervene would be associated with lower odds of violence perpetration. Additionally, the authors hypothesized that witnessing peers' abusive behaviors toward girls would be associated with greater odds of violence perpetration. Understanding the predictors of perpetration, as well as protective factors, may guide the development and refinement of prevention programs aiming to address multiple forms of violence perpetration among male adolescents.

METHODS

Study Sample

Data were from a cross-sectional survey conducted at baseline with 866 male adolescents in community settings (i.e., youth-serving organizations, churches, after school programs, and libraries) across 20 lower-resource neighborhoods in Pittsburgh, PA from August 2015 to June 2017, as part of a cluster RCT.²⁸ Eligible youth were aged 13–19 years, identified as male, and recruited to participate in a gender-specific violence prevention program. This analysis was conducted from November 2018 to April 2019. Participants completed in-person, electronic surveys. The University of Pittsburgh IRB approved the study with a waiver of parental permission. Study staff obtained verbal assent (age 13–17 years) or consent (age 18 years) from each participant. The participants received \$10 remuneration for completing the baseline survey.

Measures

Demographic characteristics included age, race/ethnicity, grade in school, nativity (born in or outside the U.S.), and highest level of parental education (for SES).

A 13-item scale measured participants' views on gender norms and behaviors, modified for a younger adolescent sample from Pulerwitz and colleagues' Gender-Equitable Men Scale²⁹ and validated in prior studies,³⁰ with items such as *A guy never needs to hit another guy to get respect* and *I would be friends with a guy who is gay*. Responses on a 5-point Likert scale, *strongly disagree* to *strongly agree*, were calculated as a mean score (Cronbach's $\alpha=0.64$; range of 1 to 5, a higher score indicating more equitable attitudes).

An 8-item attitudinal measure assessed the likelihood for a participant to intervene when witnessing male peers' harmful behaviors toward girls.³⁰ For instance, participants were asked how likely they would be to intervene if they saw a *male peer or friend... telling jokes that disrespected women and girls*. Responses on a 5-point Likert scale, *very unlikely* to *very likely*, were calculated as a mean score (Cronbach's $\alpha=0.94$, score range of 1 to 5, a higher score indicating greater intentions to intervene).

Participants reported whether they witnessed any of 9 different harmful behaviors toward women and girls (verbal, physical, sexual) among their male peers or friends (e.g., *making rude or disrespectful comments about a girl's body, clothing or make-up*) in the past 3 months.³⁰ The number of witnessed behaviors was coded as none, 1, 2, or 3 or more, with 3 or more capturing the highest quartile.

The following items asked about violence perpetration occurring in the past 9 months (the time interval between baseline and follow-up for the randomized trial). These items assessed dating abuse behaviors (emotional, physical, and sexual) against a dating partner (*someone you were in a relationship with [like he or she was your partner/girlfriend/boyfriend, you were dating or going out with them] or hooking up with*), measured as *yes* to any of 13 items, restricted to those who reported ever dating. These measures included 10 items developed for use with high school—aged youth,³⁰ as well as 3 additional physical and sexual violence perpetration questions.³¹ An affirmative response to any of these items was coded as dating abuse perpetration.

Participants were asked if they had done either of 2 sexual violence behaviors (made someone have sex with or without the use of force or threats) to someone they had NOT gone out with or hooked up with.³¹ An affirmative response to either item was coded as perpetration.

Participants were asked if they had done something sexual with someone when that person was *too drunk or high to stop you*.³² Participants were also asked whether they had purposely given someone alcohol or drugs to do something sexual with that person.³³ An affirmative response to either item was coded as use of incapacitated sex.

Five items assessed the frequency with which a participant had engaged in sexual harassment.^{33,34} Three items assessed the frequency of sexual harassment using digital

means (i.e., mobile apps, social networks, texts, or other digital communication).^{35–37} An affirmative response to any item was coded as sexual harassment.

Three items assessed for physical fighting, threats with a weapon, or injuring someone with a weapon. Responding affirmatively to any of these behaviors was coded as youth violence involvement.³⁸

Given the high lifetime prevalence of bullying and homophobic teasing behaviors, the following items were asked for the past 3 months. Three items assessed bullying behaviors and 4 items assessed similar behaviors using mobile apps, social networks, or other digital means.^{36,37,39} Any affirmative response was coded as bullying or cyber bullying. Participants were asked how many times they said words like “homo” or “gay” to someone (e.g., including to a friend, someone they didn’t know well). Any affirmative response to this behavior was coded as homophobic teasing.⁴⁰

Statistical Analysis

Descriptive statistics were calculated for each type of violence perpetration. Differences between the proportions in violence perpetration for each outcome by demographics, as well as differences in gender attitudes, intentions to intervene, and witnessing peer abuse by perpetration, were tested using Wald-log linear chi-squared or Fisher’s exact tests (categorical variables) and adjusted *F*-tests (continuous variables). Unadjusted logistic regression examined the associations between gender attitudes, intentions to intervene, and witnessing peers’ behaviors with each violence outcome. Adjusted models accounted for age and race/ethnicity, final models also adjusted for the other independent variables. Owing to small amounts of missing data, sample sizes varied slightly in the adjusted models. All the analyses accounted for neighborhood-level clustering using survey data analysis procedures in SAS, version 9.4. Significance was set at $\alpha=0.05$.

RESULTS

This community-based sample ($n=866$) mostly identified as African American (70%) or Hispanic, multiracial, or other (21%) (Table 1). Most (88%) were born in the U.S., and 85% reported still being in school. Almost half of respondents (44%) reported that their parent or caregiver had not completed high school.

Violence perpetration was highly prevalent (Table 1). Among those who ever dated, 1 in 3 (32.6%) perpetrated dating abuse in the last 9 months. Recent (past 9 months) sexual violence perpetration was also prevalent with sexual harassment (56%), incapacitated sex (11.2%; 8.2% too drunk to consent, 5.4% gave substances), and nonpartner sexual violence (5%) reported. Two thirds of the participants (67.8%) reported youth violence perpetration. Bullying and homophobic teasing were common (73.2%, and 76.3%, respectively).

Table 2 presents a summary of gender attitudes, intentions to intervene, and witnessing peers’ abusive behaviors by recent violence perpetration compared with no perpetration. The overall mean score for gender attitudes was 3.4 (SD=0.51); the mean scores ranged from 3.3 to 3.4 across different types of violence perpetration. Intentions to intervene had an overall

mean score of 2.6 (1.21) with mean scores ranging from 2.5 to 2.7 across types of violence perpetration. One third (34%) witnessed peers perpetrating 3 or more different types of abusive behaviors in the past 3 months.

Gender equitable attitudes were inversely associated with all violence perpetration items except for nonpartner sexual violence and homophobic teasing in unadjusted models (Table 3). These associations persisted in adjusted models that also included intentions to intervene and witnessing peers' abusive behaviors (AOR ranging from 0.46 [95% CI=0.29, 0.72] for dating abuse perpetration and 0.46 [95% CI=0.27, 0.79] for incapacitated sex to 0.58 [95% CI=0.46, 0.73] for bullying perpetration).

In models adjusted for age and race/ethnicity, intentions to intervene were associated with greater odds of engaging in sexual harassment and homophobic teasing (AOR=1.21, 95% CI=1.04, 1.40 and AOR=1.25, 95% CI=1.11, 1.41, respectively) (Table 3). In models accounting for witnessing abusive behaviors and gender attitudes, intentions to intervene were associated only with lower odds of youth violence perpetration (AOR= 0.83, 95% CI=0.75, 0.92).

Witnessing peers' abusive behaviors was strongly associated with multiple types of violence perpetration, with increased odds of violence perpetration with increasing number of witnessed behaviors (Table 3). In fully adjusted models, both witnessing 2 and 3 or more abusive behaviors among peers were associated consistently with increased odds of perpetrating each type of violence (ranging from AOR=1.96 [95% CI=1.06, 3.64] for incapacitated sex perpetration to AOR=4.80 [95% CI=3.38,6.81] for bullying perpetration).

DISCUSSION

This study used baseline data from a community-based violence prevention study among male high school students from urban, lower-resource neighborhoods in the U.S., and found that violence perpetration was common. Youth who endorsed more equitable gender attitudes had lower odds of reporting several different types of violence perpetration. Intentions to intervene when seeing peers engaging in behaviors harmful toward female students were associated with lower odds of youth violence perpetration only, and not sexual and partner violence. Witnessing peers' abusive behaviors toward female peers was consistently associated with greater odds of violence perpetration across multiple types.

Interestingly, gender equitable attitudes were not associated with nonpartner sexual violence and homophobic teasing. As the frequency of nonpartner sexual violence was small, the lack of statistical significance may be related to smaller sample sizes as the point estimates are consistent with the other ORs. However, homophobic teasing is puzzling, as the measure for gender attitudes includes items that assess homophobia. Given that three quarters of the sample endorsed homophobic teasing, respondents may have normalized such behaviors. Holding more gender equitable attitudes may not necessarily influence participation in homophobic teasing, which youth may perceive as a form of acceptable, possibly even pro-social, interaction with their peers.⁴¹

Research from international settings has shown that gender-transformative approaches can be effective in achieving positive health outcomes, such as increased condom use and decreased physical violence,^{42,43} and such lessons learned are now being applied in the urban U.S. context.⁴⁴ Notably, in international settings, few gender-transformative programs directly target bullying and violence among peers. These findings underscore the potential impact of integrating gender and social norms change beyond sexual and partner violence to address bullying and youth violence prevention.

Surprisingly, intentions to intervene with peers engaging in abusive, gendered behaviors were not associated with most types of violence. The positive correlation with sexual harassment and homophobic teasing seen in the model adjusted for age and race/ethnicity that attenuates when including gender attitudes and witnessing in the models, is challenging to explain. Given how common these behaviors were among youth in this sample, it may be that youth who are inclined to intervene with peers are more attuned to and thus more likely to report such behaviors in themselves; once accounting for witnessing, intentions to intervene are associated only with less youth violence perpetration. It is also possible that another underlying, unmeasured construct related to their social network is involved, such that male adolescents who report greater confidence speaking up to their peers (reflected in their intentions to intervene) are in tighter social networks with male friends who may enforce closeness through engaging in sexual harassment and homophobic teasing, what feminist scholars have identified as “networks of accountability.”⁴⁵ Notably, intentions to intervene did not follow the same pattern as gender attitudes, suggesting that these 2 constructs may be associated with violence through distinct pathways. Finally, only intentions to intervene were assessed rather than actual bystander behaviors. It is possible that youth who engage in positive bystander behaviors would be less inclined to participate in sexual harassment and homophobic teasing as well as other forms of violence perpetration.

Witnessing male peers engaging in harmful behaviors toward female students was strongly associated with adolescent males reporting violence perpetration. Social norms theory posits that youth may underestimate the extent to which their peers endorse pro-social bystander interventions and nonviolence overall,^{28,46} and encourages prevention approaches that challenge misperceptions of the extent to which peers condone such violence. These findings, however, underscore the limitations of simply presenting youth with “accurate normative data” to encourage positive bystanding, when youth are embedded in peer networks where interpersonal violence perpetration is common. Consistent with theories of social learning, the violence modeled within peer networks may provide scripts for accepting and participating in such behaviors. Interpersonal violence prevention efforts should acknowledge the violence to which adolescent males have already been exposed (witnessing, experiencing, or using) and should involve young men in creating solutions to interrupt such violence in ways that feel authentic and achievable.

Limitations

Findings should be interpreted in light of several limitations. First, as is common in violence-related research, the survey items were all self-reported. This study used an

innovative strategy of a personally generated code, to assure the youth that their responses would be anonymous to encourage honest reporting. Second, the study was conducted in urban neighborhoods with concentrated disadvantage, and thus, may not generalize to other geographic regions or suburban and rural settings. Third, although the gender attitudes measure has been used in prior studies, the internal consistency of these items was lower for this sample and pose a threat to validity. Fourth, although examining types of dating abuse perpetration, both witnessed and used, would add granularity, smaller cell sizes precluded more detailed analyses. Adolescent relationships tend to be fluid; thus, partner and nonpartner distinctions may also overlap. Finally, as a cross-sectional study, the direction of the relationships among attitudes, witnessing, and violence is unclear, and no causal inferences can be drawn.

CONCLUSIONS

This is the first study to elicit information from male adolescents in U.S. urban, community-based settings (rather than schools or clinics) to examine different types of interpersonal violence perpetration and associations with gender attitudes, intentions to intervene, and witnessing peers' abusive behaviors. Male adolescents with more gender equitable attitudes have lower odds of violence perpetration across multiple domains. Witnessing male peers engaged in abusive behaviors toward female adolescents is strongly associated with increased odds of multiple types of interpersonal violence perpetration. Although there are certainly notable differences between sexual and nonsexual, as well as dating and nonpartner violence, the consistent associations found in this study highlight the opportunity for cross-cutting prevention strategies that reduce multiple forms of violence perpetration. These strategies include explicitly challenging gender and social norms, while simultaneously working with male adolescents to increase their skills in interrupting peers' disrespectful and harmful behaviors toward female adolescents.^{6,7} Furthermore, comprehensive primary prevention of dating, sexual, and youth violence is needed that promotes healthy relationships^{7,47} combined with policies and programs that aim to reduce all forms of interpersonal violence.

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Table 1.

Sample Characteristics and Recent Violence Perpetration

Characteristic	Dating abuse (among daters) ^a					Homophobic teasing (n=661) % (n)
	Total (n=866) % (n)	Nonpartner sexual violence (n=43) % (n)	Incapacitated sex (n=97) % (n)	Sexual harassment (n=485) % (n)	Youth violence (n=587) % (n)	
Overall sample	32.6	5.0	11.2	56.0	67.8	73.2
Age, years						
13–14	32.3 (280)	3.6 (10)	12.5 (35)	51.4 (144)	78.6 (220)	78.2 (219)
15–16	39.2 (339)	6.5 (22)	11.5 (39)	60.5 (205)	64.3 (218)	74.9 (254)
17–19	28.3 (245)	4.5 (11)	9.4 (23)	55.5 (136)	60.4 (148)	65.3 (160)
p-value	1.000	0.133	0.321	0.057	0.003**	0.033*
Race/ethnicity						
Black/African American	70.4 (610)	4.3 (26)	10.3 (63)	56.9 (347)	70 (427)	76.6 (467)
White	3.4 (29)	13.8 (4)	10.3 (3)	55.2 (16)	65.5 (19)	75.9 (22)
Hispanic	6.1 (53)	9.4 (5)	26.4 (14)	66 (35)	71.7 (38)	67.9 (36)
Multiracial	6.4 (55)	1.8 (1)	5.5 (3)	54.6 (30)	69.1 (38)	72.7 (40)
Other	8.1 (70)	8.6 (6)	12.9 (9)	51.4 (36)	61.4 (43)	62.9 (44)
p-value	0.033*	0.130	0.008**	0.510	0.818	0.206
Born in the U.S.						
Yes	87.6 (759)	4.9 (37)	10.8 (82)	57.1 (433)	69.6 (528)	74.8 (568)
No	5.7 (49)	6.1 (3)	14.3 (7)	46.9 (23)	59.2 (29)	69.4 (34)
p-value	0.087	0.742	0.467	0.182	0.335	0.452
Education status						
Currently in school	84.9 (735)	4.4 (32)	10.3 (76)	56.1 (412)	68.8 (506)	74.8 (550)
Not in school – completed high school diploma	3.2 (28)	7.1 (2)	21.4 (6)	57.1 (16)	67.9 (19)	67.9 (19)
Not in school – did not complete high school diploma	4.9 (42)	14.3 (6)	14.3 (6)	57.1 (24)	73.8 (31)	73.8 (31)
p-value	0.035*	0.068	0.246	0.988	0.877	0.597
Current grade level ^b						
8th	22.2 (163)	2.5 (4)	11.7 (19)	50.3 (82)	75.5 (123)	77.9 (127)
						79.1 (129)

Characteristic	Dating abuse (among daters) ^a							
	Total (n=866) % (n)	(n=202) % (n)	Nonpartner sexual violence (n=43) % (n)	Incapacitated sex (n=97) % (n)	Sexual harassment (n=485) % (n)	Youth violence (n=587) % (n)	Bullying (n=634) % (n)	Homophobic teasing (n=661) % (n)
9th	24.5 (180)	33.3 (47)	4.4 (8)	11.7 (21)	54.4 (98)	71.1 (128)	77.8 (140)	81.1 (146)
10th	20.5 (151)	35.3 (42)	6 (9)	10.6 (16)	64.9 (98)	67.6 (102)	75.5 (114)	80.1 (121)
11th	17.7 (130)	25.5 (24)	4.6 (6)	8.5 (11)	55.4 (72)	60.8 (79)	68.5 (89)	71.5 (93)
12th	9.8 (72)	37.3 (22)	6.9 (5)	9.7 (7)	59.7 (43)	68.1 (49)	72.2 (52)	83.3 (60)
College	0.8 (6)	0 (0)	0 (0)	0 (0)	16.7 (1)	33.3 (2)	83.3 (5)	100.0 (6)
<i>p</i> -value ^{b,c}		0.501	0.562	0.881	0.065	0.266	0.325	0.195
Parents' or caregivers' highest education								
Did not complete high school	43.7 (378)	36.7 (95)	4.2 (16)	13.2 (50)	56.1 (212)	71.2 (269)	72.2 (273)	74.9 (283)
Completed high school or GED	17.2 (149)	27.0 (31)	4 (6)	12.8 (19)	54.4 (81)	65.1 (97)	73.8 (110)	81.2 (121)
Some college	7.6 (66)	38.2 (21)	7.6 (5)	9.1 (6)	54.6 (36)	74.2 (49)	83.3 (55)	81.8 (54)
College degree or higher	24.1 (209)	30.1 (49)	7.2 (15)	8.6 (18)	62.7 (131)	68.9 (144)	76.6 (160)	80.4 (168)
<i>p</i> -value ^b		0.230	0.298	0.301	0.346	0.171	0.200	0.147

Notes: Boldface indicates statistical significance (**p*<0.05; ***p*<0.01).

All perpetration include any incidents in the past 9 months, except for homophobic teasing and bullying, which are in the past 3 months.

All the rates are row percents.

All the *p*-values indicate Wald-log linear chi-squared tests comparing the proportion of participants who perpetrated by each demographic characteristic, accounting for neighborhood-level clustering.

^aRestricted to those who have ever dated (n=619).

^bRestricted to those currently in school (n=735).

^cOnly students in the 8th to 12th grade were used in the Wald-log linear chi-squared test.

Table 2. Gender Attitudes, Intentions to Intervene, Witnessing Peers' Abusive Behaviors Among Users and Non-Users of Violence

Variable	Overall sample (n=866)	Dating abuse ^a (n=202)	Nonpartner sexual violence (n=43)	Incapacitated sex (n=97)	Sexual harassment (n=485)	Youth violence (n=587)	Bullying (n=634)	Homophobic teasing (n=661)
Overall sample, %		32.6	5.0	11.2	56.0	67.8	73.2	76.3
Gender equitable attitudes, mean (SD)								
Overall	3.4 (0.51)							
Violence		3.3 (0.44)	3.3 (0.52)	3.2 (0.47)	3.3 (0.48)	3.4 (0.49)	3.4 (0.51)	3.4 (0.49)
No violence		3.5 (0.51)	3.4 (0.50)	3.4 (0.50)	3.5 (0.53)	3.5 (0.54)	3.4 (0.50)	3.3 (0.57)
<i>p</i> -value ^b		0.001**	0.193	0.001**	0.001**	0.032*	0.057	0.052
Intentions to intervene, mean (SD)								
Overall	2.6 (1.21)							
Violence		2.7 (1.08)	2.7 (1.10)	2.5 (0.98)	2.7 (1.08)	2.5 (1.16)	2.6 (1.16)	2.6 (1.18)
No violence		2.6 (1.26)	2.5 (1.22)	2.6 (1.24)	2.4 (1.35)	2.7 (1.32)	2.4 (1.35)	2.3 (1.29)
<i>p</i> -value ^b		0.606	0.345	0.913	0.007**	0.023*	0.049*	<0.001***
Peers' abusive behaviors witnessed, column % (n)								
None witnessed	38.2 (331)							
Violence ^c		26.2 (53)	21.0 (9)	26.0 (25)	28.7 (139)	34.1 (200)	31.4 (199)	32.4 (214)
No violence ^d		40.5 (169)	38.9 (308)	39.7 (293)	51.5 (189)	47.5 (116)	60.3 (129)	60.6 (117)
One behavior witnessed	16.4 (142)							
Violence ^c		11.4 (23)	14.0 (6)	20.0 (19)	17.3 (84)	16.7 (98)	17.8 (113)	16.9 (112)
No violence ^d		17.0 (71)	16.9 (134)	16.4 (121)	15.8 (58)	17.2 (42)	13.1 (28)	15.5 (30)
Two behaviors witnessed	9.8 (85)							
Violence ^c		13.9 (28)	19.0 (8)	12.0 (12)	11.1 (54)	10.2 (60)	10.6 (67)	11.0 (73)
No violence ^d		7.9 (33)	9.7 (77)	9.6 (71)	8.5 (31)	9.0 (22)	7.9 (17)	6.2 (12)
Three or more behaviors witnessed	34.3 (297)							

Variable	Overall sample (n=866)	Dating abuse ^d (n=202)	Nonpartner sexual violence (n=43)	Incapacitated sex (n=97)	Sexual harassment (n=485)	Youth violence (n=587)	Bullying (n=634)	Homophobic teasing (n=661)
Violence ^c		48.5 (98)	47.0 (20)	41.0 (40)	42.9 (208)	38.7 (227)	40.2 (255)	39.6 (262)
No violence ^d		34.1 (142)	34.1 (270)	34.2 (252)	23.7 (87)	26.2 (64)	18.2 (39)	17.6 (34)
<i>P</i> -value ^e		<0.001 ***	0.050 *	0.021 *	<0.001 ***	0.001 **	<0.001 ***	<0.001 ***

Notes: Boldface indicates statistical significance (**p*<0.05; ***p*<0.01; ****p*<0.001).

Some percentages may not sum to 100 owing to small amounts of missing data.

All perpetration are any incidents in the past 9 months, except for homophobic teasing and bullying, which are in the past 3 months.

Peers' abusive behaviors witnessed are measured in past 3 months.

^aRestricted to those who have ever dated (*n*=619).

^bAdjusted *F*-tests comparing attitudes by violence perpetration (any or none), accounting for neighborhood-level clustering.

^cPercent of those who witnessed x number of peers' abusive behaviors among those who used the type of violence listed in the column (e.g., of those who perpetrated dating abuse, 26.2% witnessed no abusive behaviors).

^dPercent of those who witnessed x number of peers' abusive behaviors among those who did not use the type of violence listed in the column (e.g., of those who did not perpetrate dating abuse, 40.5% witnessed no abusive behaviors).

^eWald-log linear chi-squared test comparing each demographic characteristic by each violence perpetration category (any or none), accounting for neighborhood-level clustering.

Table 3. Associations Between Gender Attitudes, Intentions to Intervene, Witnessing Abuse, and Recent Violence Perpetration

Variable	Dating abuse	Nonpartner sexual violence	Incapacitated sex	Sexual harassment	Youth violence	Bullying	Homophobic teasing
Unadjusted associations, OR (95% CI)							
Gender attitudes	0.52** (0.36, 0.76)	0.62 (0.28, 1.36)	0.47** (0.29, 0.74)	0.57*** (0.45, 0.73)	0.60* (0.39, 0.92)	0.77* (0.60, 0.99)	1.36 (0.98, 1.89)
Intentions to intervene	1.04 (0.89, 1.22)	1.11 (0.88, 1.41)	0.99 (0.86, 1.14)	1.23** (1.06, 1.42)	0.88* (0.80, 0.98)	1.17 (0.99, 1.37)	1.27*** (1.13, 1.42)
Peers' abusive behaviors witnessed							
None	Ref	Ref	Ref	Ref	Ref	Ref	Ref
One	1.03 (0.52, 2.07)	1.53 (0.70, 3.35)	1.84* (1.11, 3.05)	1.97** (1.31, 2.97)	1.35 (0.93, 1.97)	2.62** (1.50, 4.57)	2.04* (1.14, 3.66)
2 behaviors	2.71*** (1.69, 4.34)	3.56** (1.57, 8.07)	1.98 (0.95, 4.12)	2.37*** (1.57, 3.58)	1.58* (1.05, 2.38)	2.56*** (1.56, 4.20)	3.33** (1.72, 6.44)
3 or more behaviors	2.20** (1.29, 3.77)	2.54 (0.98, 6.57)	1.86* (1.03, 3.36)	3.25*** (2.43, 4.34)	2.06*** (1.52, 2.79)	4.24*** (3.09, 5.81)	4.21*** (2.65, 6.69)
Models adjusted for age and race/ethnicity only, AOR (95% CI)							
Gender attitudes	0.51** (0.35, 0.76)	0.63 (0.28, 1.44)	0.48** (0.29, 0.78)	0.59*** (0.47, 0.75)	0.56** (0.38, 0.84)	0.73** (0.59, 0.89)	1.25 (0.85, 1.83)
Intentions to intervene	1.02 (0.88, 1.18)	1.16 (0.92, 1.47)	0.99 (0.85, 1.14)	1.21* (1.04, 1.40)	0.89 (0.80, 1.00)	1.16 (0.98, 1.37)	1.25*** (1.11, 1.41)
Recently witnessed peers' abusive behaviors							
0 behaviors	Ref	Ref	Ref	Ref	Ref	Ref	Ref
1 behavior	1.06 (0.52, 2.15)	1.60 (0.63, 4.07)	1.84* (1.06, 3.17)	1.96** (1.27, 3.05)	1.48* (1.00, 2.18)	2.95** (1.62, 5.39)	2.09* (1.18, 3.71)
2 behaviors	2.92*** (1.71, 4.99)	3.94** (1.74, 8.90)	1.86 (0.94, 3.69)	2.34*** (1.57, 3.50)	1.65* (1.05, 2.59)	2.69*** (1.59, 4.57)	3.05** (1.52, 6.13)
3 or more behaviors	2.20** (1.24, 3.94)	2.92 (0.99, 8.64)	1.79 (0.96, 3.33)	3.09*** (2.24, 4.25)	2.34*** (1.75, 3.13)	4.39*** (3.17, 6.07)	4.45*** (2.78, 7.11)
Models adjusted for all variables in column, age, and race/ethnicity, AOR (95% CI)							
Gender attitudes	0.46** (0.29, 0.72)	0.56 (0.25, 1.25)	0.46** (0.27, 0.79)	0.50*** (0.37, 0.67)	0.51** (0.34, 0.76)	0.58*** (0.46, 0.73)	1.11 (0.78, 1.58)
Intentions to intervene	0.97 (0.84, 1.11)	1.10 (0.85, 1.42)	0.93 (0.80, 1.09)	1.11 (0.96, 1.27)	0.83** (0.75, 0.92)	1.02 (0.87, 1.19)	1.12 (0.99, 1.27)
Recently witnessed peers' abusive behaviors							
0 behaviors	Ref	Ref	Ref	Ref	Ref	Ref	Ref

Variable	Dating abuse	Nonpartner sexual violence	Incapacitated sex	Sexual harassment	Youth violence	Bullying	Homophobic teasing
1 behavior	1.03 (0.52, 2.01)	1.51 (0.62, 3.68)	1.79* (1.00, 3.21)	1.95** (1.22, 3.09)	1.58* (1.08, 2.33)	2.98*** (1.67, 5.32)	2.00* (1.11, 3.61)
2 behaviors	3.40*** (1.85, 6.28)	4.05*** (1.86, 8.82)	2.14* (1.05, 4.33)	2.56*** (1.75, 3.74)	2.07** (1.35, 3.17)	3.07*** (1.77, 5.33)	2.85** (1.43, 5.69)
3 or more behaviors	2.41** (1.31, 4.44)	2.89* (1.06, 7.88)	1.96* (1.06, 3.64)	3.22*** (2.23, 4.66)	2.89*** (2.16, 3.87)	4.80*** (3.38, 6.81)	4.29*** (2.80, 6.58)

Note: Boldface indicates statistical significance (* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$).